

A NEW *EUPHORBIA* FROM SOUTH AFRICA

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ABSTRACT

A new rhizomatose dwarf *Euphorbia* from the Richtersveld is described. Closely related to the recently described *E. namuskluftensis* Leach, it is distinguished by its different styles, capsule and seed, as well as by other less important characters.

UITTREKSEL

'N NUWE *EUPHORBIA* VANAF SUID-AFRIKA

'n Nuwe wortelstokagtige dwerg-*Euphorbia* vanaf die Richtersveld word beskryf. Dit is naverwant aan die pas beskryfde *E. namuskluftensis* Leach en word onderskei deur verskille aan die styl, saaddoos en saad sowel as ander minder belangrike kenmerke.

Key words: *Euphorbia*, sp. nov., Euphorbiaceae, Richtersveld, Gariep Centre.

Euphorbia miscella Leach, sp. nov.

Euphorbia wilmaniae Marl. in S. Afr. Gdng Country Life **21**: 127, 133 (1931), p.p. quoad specim. *Marloth 12441* (PRE), et distrib. Richtersveld, et excl. fig. 38.—White, Dyer & Sloane, Succ. Euphorbiaceae, **2**: 513 (1941), p.p. quoad distrib. Namaqualand.—Wilman, Check List, Fl. Pl. Ferns, Griqual. W. (1946), p.p.—Jacobsen, Lexicon Succ. Pl.: 234 (1974), p.p. quoad distrib. Namaqualand.

E. namuskluftensi Leach arcte affinis sed foliis ovalibus grandioribus; cyathio proportionem longiore angustiore, in stipite crasso, 2–4 mm longo portato; pedunculi bracteis terminalibus gemmis axillaribus saepe instructis; stylis longioribus in columnam 1,5 mm longam connatis; capsula grandiora formaque dissimili; semine grandiore glebulosiore differt; etiam ad *E. wilmaniae* Marl. characteribus vegetativis arcte accedens sed cyathiis, praecipue glandulis integris facile distinguenda.

Planta dioecia, succulenta, inermis; radix dense rhizomatosa tuberosa; ramis aeriis brevibus, raro in longitudinem 20 mm attingentibus, singulatim vel in caespites ad spatium extremumque rhizomate exorientibus, spiraliter tuberculatis, estipularibus, variabiliter micro-scabrellis. c. 5 mm crassis.

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Folia carnosa, ovales, acuta, patentes, leviter recurva, plerumque aliquam plicata sed ecarinata, decidua, cicatrice brunnea, prominenti tuberculi ad apicem remanenti. *Inflorescentia* apicalis, axillaris, plerumque cyathio solitario unisexuali in pedunculo bracteato usque ad 7 mm longo portato (in planta feminea brevior); bracteae ovales vel in planta mascula plerumque oblongae, paribus supremis suboppositis saepe gemmis axillaribus insertis. *Cyathium* glabrum; glandulis subquadratis c. 1,5 mm latis, ad apicem leviter rugulosis, aliquam crenulatis, incrassatis, breviter recurvis; lobi subquadrati, c. 1 mm longi, irregulariter dentati, intus extus pubescentes. *Cyathium* masculum aliquanto doliiforme vel urceolatum usque ad 4,5 mm longum, 3,5 mm diam. glandulis inclusis, breviter stipitatum, stipite 2–4 mm longo; floribus plus minusve 20, cum aliquot bracteolis plumosis; pedicelli glabri, antherae maturae non visae. *Cyathium* subsessile, plus minusve cyathiforme, 3,5 mm longum, 4,5 mm latum glandulis inclusis; florum masculorum bracteolarumque vestigiis basi intus praeditis; flos femineus subsessilis; styli c. 2,5 mm longi, in columnam 1,5 mm longam connati, partibus libris patulis, profunde bifidis, lobis late divergentibus recurvis. *Capsula* glabra ex involucri modo exserta, trilobata, late ovoidea, c. 6 mm alta, 7 mm lata. *Semen* ovoideum acutum, 4-angulatum, irregulariter glebulosum, brunneum, 4,5 mm longum, 3 mm diam.

Typus: Richtersveld, Leach, G. & F. Williamson 16545 (NBG, holo.; PRE).

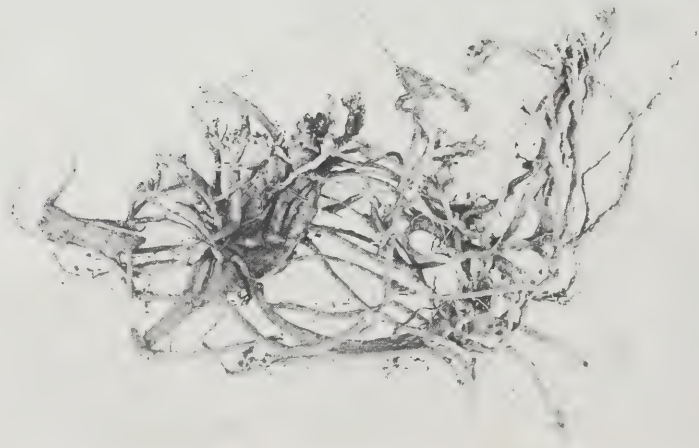


FIG. 1.

Euphorbia miscella Leach. Leach, G. & F. Williamson 16545 from $\pm$ 8 miles S of Lekkersing.

Plant dioecious, unarmed, succulent; *root* densely rhizomatose-tuberos; *aerial branches* spirally tuberculate, estipulate, patchily micro-scabridulous, ± 5 mm thick, seldom attaining 20 mm in length (longer and usually simple in cultivation), arising singly and in small tufts at the ends and at intervals along the rhizomes. *Leaves* fleshy, glabrous, broadly oval, acute, spreading, slightly recurved, usually somewhat folded but not keeled, caducous, leaving a prominent brown scar at the tubercle apex. *Inflorescence* apical, axillary, usually a single unisexual cyathium, borne on a bracteate peduncle up to 7 mm long in the male plant, shorter in the female; bracts oval or in the male plant usually oblong, with the uppermost subopposite pair often subtending axillary buds. *Cyathium* glabrous, *glands* subquadrate, $\pm 1,5$ mm broad, thickened and shortly recurved at the slightly rugulose, somewhat crenulate apex; *lobes* subquadrate, ± 1 mm long, irregularly dentate, pubescent both sides; septa much reduced, dividing into 1 or 2 plumose bracteoles above. *Male cyathium* more or less barrel-shaped or somewhat urceolate up to 4,5 mm long, 3,5 mm diam. including the erect glands, shortly stipitate, stipe 2–4 mm long; flowers ± 20 with a few plumose bracteoles, pedicels glabrous, ± 2 mm long; mature anthers not seen. *Female cyathium* subsessile, more or less cup-shaped, 3,5 mm long, 4,5 mm diam. including the erectly spreading glands, with vestiges of male flowers and bracteoles at its base inside; female flower subsessile, perianth rim-like, sparsely pubescent; *styles* $\pm 2,5$ mm long, united into a column 1,5 mm long, the free portions widely spreading, deeply bifid and the lobes widely diverging recurved, stigmas minutely rugulose. *Capsule* glabrous, finally just exerted from the involucre, 3-lobed, $\pm$ broadly ovoid, ± 6 mm high, 7 mm diam. *Seed* ovoid acute, 4-angled, the dorsal angle rather obscure, irregularly lumpy, brown, 4,5 mm long, 3 mm diam., suture narrowly sharply sulcate.

Although *E. miscella* is described as dioecious it should be mentioned that this is based on the assumption that plants are unisexual. It has not been possible to establish this with certainty as rhizomes were unavoidably broken when extracting specimens from their rocky habitat. However, none has been seen bearing cyathia of both sexes and in view of this and its close affinity with *E. namuskluftensis* it is considered that the assumption is quite justified.

E. miscella is most closely related to the recently described *E. namuskluftensis* and like that species could easily be mistaken for *E. wilmaniae* if the vegetative characters only were considered, but again, like *E. namuskluftensis*, is easily distinguished therefrom when flowering, by its smaller cyathia with entire glands.

The Richtersveld species differs from its South West African relative in its larger oval leaves and its proportionally longer and narrower male cyathi-

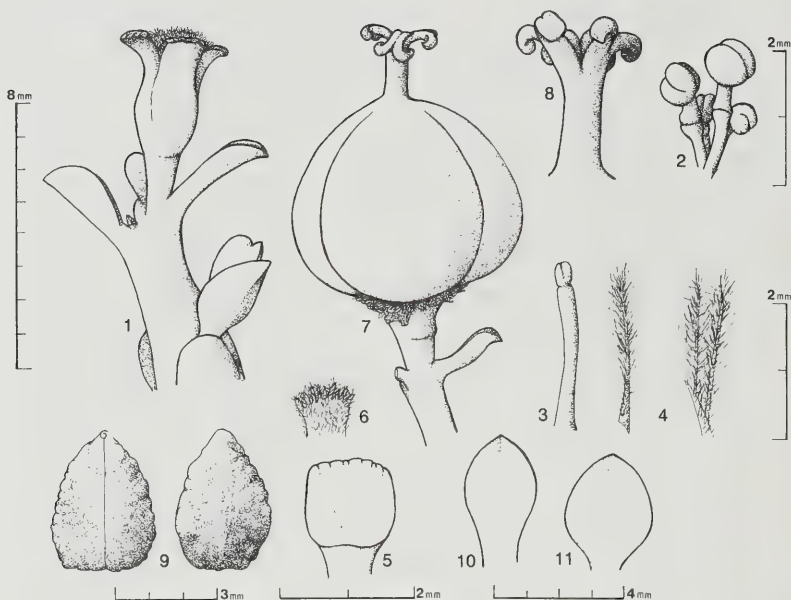


FIG. 2.

Euphorbia miscella Leach. 1, male inflorescence; 2, male flowers (immature); 3, aborted ovary; 4, bracteoles; 5, involucral gland; 6, lobe; 7, capsule; 8, styles; 9, seed; 10, bract; 11, leaf.

um which is borne on a stout stipe; of major importance however, are the entirely different styles of the new species, these are at least twice as long as those of its relative and are united into a more slender column three times as long as in *E. namuskluftensis*. In addition the larger capsule is broadly ovoid in outline and the larger seeds are more heavily and irregularly lumpy.

Additionally to the above differentia it seems possible that *E. miscella* may sometimes develop a dichasial inflorescence, as well-developed buds are sometimes to be seen in the axils of the uppermost peduncular bracts on each side of the base of the cyathial stipe.

Marloth's original specimen (*Marloth 12441*) was cited as a syntype of *E. wilmaniae*, this erroneous identification apparently resulting from the confusion caused by the addition, three years later, of a cultivated flowering branch of this species to a sterile specimen of *E. miscella* from Lekkersing.

MATERIAL EXAMINED

SOUTH AFRICA, CAPE—2817 (Vioolsdrif): Lekkersing (-CC), 5/9/1925, *Marloth 12441* (PRE) (not including PRE 46364 & 46365 which are mounted on the same sheet but represent *E. wilmaniae*).

—2917 (Springbok): ± 8 miles of Lekkersing (-AA), fr. 9/4/1977, *G & F. Williamson 2515* (K); *ibid.* fl. 23/4/1982, *Leach, G. & F. Williamson 16545* (NBG, holo., PRE) *ibid.* fl. & fr. 10/10/1982, *G. & F. Williamson 3206* (NBG).

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